Appendix I
RWSP Wastewater Planning Policies

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A. Explanatory material. The wastewater planning policies are intended to guide the county in its long-term comprehensive planning for design and construction of facilities that meet the wastewater needs of customers within the service area.

Recognizing that the RWSP is a complex and dynamic comprehensive development guide that will regularly need to be updated, the county will conduct annual reviews of plan implementation and its consistency with policies, and of scientific, economic and technical information as well as periodic comprehensive reviews of the assumptions on which the RWSP is based.

These policies also express the intent of the council to request that the RWQC continue review of the conditions and assumptions that guide the implementation of the RWSP.

Wastewater Planning Policies	How Implemented in 2004–2006
WWPP-1: King County shall plan comprehensively to provide for the design and construction of facilities that meet the wastewater system needs of the service area and shall coordinate with other local jurisdictions to ensure that construction-related disruption to neighborhoods is minimized.	WTD considers several factors to ensure comprehensive wastewater planning. Flow monitoring and facilities inspections provide key information related to capacity, maintenance, and asset replacement needs. WTD reviews population and employment forecasts, water conservation assumptions, and rainfall data and incorporates updated information into its planning of facilities. In addition, WTD reviews the comprehensive plans of its component agencies and meets with representatives of those agencies to confirm planning assumptions as well as to coordinate construction related activities. WTD regularly works with permitting agencies, local jurisdictions and affected neighbors during the planning, design and construction of projects to minimize construction related disruptions. Agreements related to hours of construction, parking for construction workers, noise control, and traffic control measures often result from these efforts.
WWPP-2: In planning future wastewater systems, King County shall make a long-term assessment of wastewater system needs.	To protect public health and water quality, it is essential to plan wastewater facilities before they are needed. The RWSP outlined wastewater needs through 2030 and beyond. Current planning is through 2050—when the county's wastewater service area is expected to reach saturation. To ensure that existing and planned facilities will meet future needs, the county monitors population and employment forecasts, comprehensive plans of the county's component agencies, the potential for new regulations, new technologies, and information relating to climate change.
WWPP-3: In planning for facilities, King County shall work collaboratively with other jurisdictions and look for opportunities to achieve cost-savings.	Recent examples of how this policy is implemented include: • **Executive's Recommended I/I Program**. The recommendations in this King County Council approved program represent the

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	consensus reached by the county and component agencies throughout the six-year program development process. Implementation of this program is under way and will help determine if enough I/I can be cost-effectively removed from the collection system to delay, reduce, or eliminate some otherwise needed conveyance improvement project. • **Partnership with Ducks Unlimited.** King County is partnering with Ducks Unlimited, a nonprofit organization dedicated to wetland conservation, to design the Carnation Treatment Plant wetland discharge project. This partnership will help reduce costs and expedite implementation of the project. • **Brightwater Backbone.** Building the reclaimed water pipes during construction of the Brightwater conveyance tunnels and providing reclaimed water to the Sammamish Valley from the backbone are more cost-effective than building and operating a stand-alone satellite facility in the Sammamish Valley. Building the backbone now is less expensive and less disruptive to the local jurisdictions than building it in the future. • **Conveyance System Improvement (CSI) Program Update.** During the process to update the CSI program, King County and the Metropolitan Water Pollution Abatement Advisory Committee (MWPAAC) worked collaboratively to identify and analyze alternative cost containment strategies, such as delaying or phasing project construction. To assist in identifying the most pressing conveyance system needs, prioritization criteria were jointly developed and applied to planned conveyance projects. • **Ballard Siphon Replacement Project.** Coordination within WTD also provides opportunities for cost-savings. The Ballard Siphon Replacement Project—initiated in 2006 and scheduled for completion in 2010—will protect water quality in the Lake Washington Ship Canal by replacing the 70-year-old wooden sewer pipe that extends across the floor of Salmon Bay near the Hiram M. Chittenden Locks. In addition, the project is being designed to bring the CSO at the Ballard Regulator Station under control and, thus, eliminate the need for the CSO storage project at this location scheduled in the RWSP

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	for completion in 2029. The project also holds the potential to reduce CSOs at the 11th Avenue Regulator Station and thus reduce the size of the CSO storage project planned for completion at this location in 2030.
WWPP-4: Facility sizing shall take into account the need to accommodate build-out population.	As mentioned in WWPP-2, current planning considers needs through 2050, which is when the county's wastewater service area is anticipated to be fully built out and all portions of the service area will be connected into the wastewater treatment system. The updated conveyance system improvement program identifies the separated conveyance system needs that are necessary to accommodate projected regional growth and volumes of I/I through the year 2050 (see Chapter 3). The RWSP and subsequent population and flow updates identified needed future expansions to South Treatment Plant and Brightwater Treatment Plant.
WWPP-5: RWSP review processes. King County shall monitor the implementation of the RWSP and conduct reviews of the RWSP as outlined in K.C.C. 28.86.165. *(Ordinance 15384 amended this policy, establishing a new section of the King County Code* [KCC 28.86.165] *that outlines the RWSP reporting policies.)*	The reporting policies that were adopted by the King County Council in March 2006 are being followed. The 2005 RWSP Annual Report was submitted to the King County Council in September 2006; the RWQC reviewed the report in October 2006. The *RWSP 2006 Comprehensive Review and Annual Report* is presented in according with the RWSP reporting policies. The reporting and wastewater planning policies also call for the county to review assumptions on the rate and location of growth, on the rate of septic conversions, and on water conservation efforts. There were no updates made to the population and employment forecast data presented in the *RWSP 2004 Update* because there were no new PSRC forecasts by traffic analysis zones in 2004–2006. Projections reported in the 2004 update confirmed the need for the major treatment and conveyance improvements that are under way and planned through 2030. The process to update the conveyance system improvement (CSI) yielded information from the component agencies that prompted changes in some of the estimated dates that 20-year peak flow volumes will exceed the capacity of regional conveyance facilities (see Chapter 3). However, the overall projections for the 20-year peak flow in 2050 did not change. The key planning assumptions used to determine flow projections and facility sizing remain as follows: • **Extent of Eventual Service Area.** The assumed extent of the planning area is the sewerable areas within Urban Growth Areas of King, Snohomish, and Pierce counties

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	where King County WTD has sewage disposal contracts. • **Future Population.** PSRC 2003 data by traffic analysis zones (TAZ), which is forecasted out to 2030, is allocated to sewer basins to determine future flow projections. The maximum wastewater system service area population is a straight line extrapolation of the growth rate between 2020 and 2030 out to 2050. • **Water Conservation.** WTD continues to assume a 10 percent reduction in per day water consumption between 2000 and 2010, with no additional reduction after 2010. • **Septic Conversion.** The current planning assumption is that 90 percent of the unsewered area (in year 2000) with potential for sewers will be sewered by 2030 and that 100 percent of this area will be sewered by 2050. • **Infiltration/Inflow (I/I) Degradation.** WTD assumes that I/I degradation starting in 2000 would be 7 percent per decade, with a limit of 28 percent over a 40-year period; for new construction, the degradation assumption of 7 percent per decade will start after the decade of construction, to a maximum of 28 percent. Future monitoring and modeling may provide refinements to this estimate. • **Design Standard.** In accordance with RWSP Conveyance Policy (CP)-1, the 20-year peak flow storm in 2050 is used as the design standard for the separated regional conveyance system. • **Planning Horizon.** The year 2050 is used to represent the projected date that the regional wastewater service area will be fully built out and all sewerable portions of the service area will be connected into the wastewater system. WTD extrapolates the PSRC population forecasts linearly from 2030 to 2050 for each of the wastewater basins. RWSP WWPP-4 calls for facility sizing to take into account the need to accommodate build-out population. WTD will continue to review and analyze future information that could affect RWSP planning assumptions and make adjustments, if needed, to flow projections and facility needs and sizing.